

Abstract. We study the asymptotic behavior of the eigenvalues of the Laplacian on a family of Riemannian manifolds with boundary. The manifolds are obtained by a deformation of a fixed manifold. The deformation is given by a family of functions. We show that the eigenvalues of the Laplacian on the deformed manifold converge to the eigenvalues of the Laplacian on the fixed manifold as the deformation parameter goes to zero. The convergence is uniform for the first N eigenvalues, where N is independent of the deformation parameter. The proof is based on the asymptotic expansion of the eigenvalues and the eigenfunctions of the Laplacian on the deformed manifold.

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